Department of Marine Resources
Site Review

Summit Point, LLC
1 Shady Lane
Falmouth, ME 04105

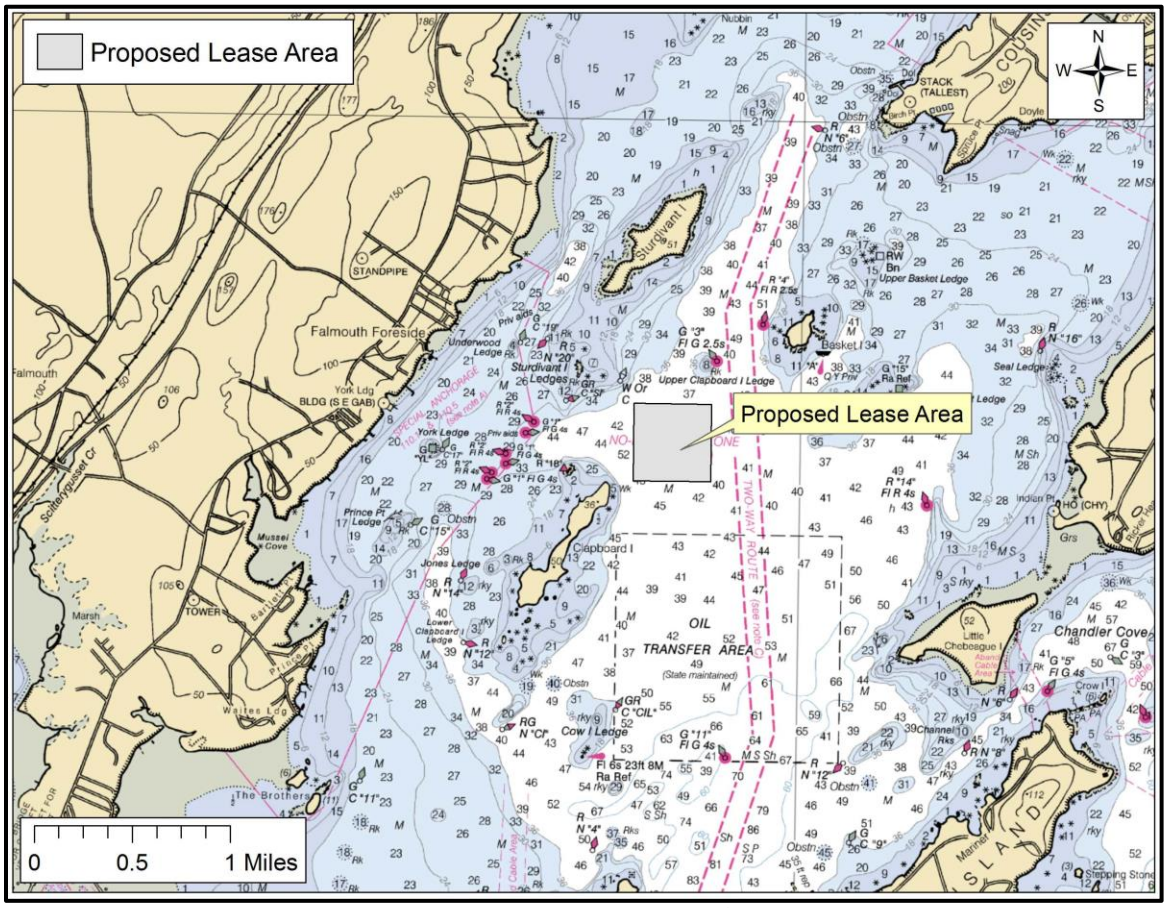

Figure 1: Vicinity map[1]

Location: Northeast of Clapboard Island, Falmouth and Cumberland, Cumberland County, Maine

Purpose: Standard lease for the suspended culture of sugar kelp (*Saccharina latissima*[2]) and skinny kelp (*Saccharina angustissima*[3])

Site Review by: Marcy Nelson, Flora Drury, and Cheyenne Adams
Report Preparation by: Flora Drury, Marcy Nelson, and Cheyenne Adams

Report Submitted: March 18, 2021

[1]Unless otherwise noted, all figures in this report were created in ArcMap version 10.6 using digitized NOAA Nautical Charts or geo-referenced aerial photographs provided by The Maine Office of GIS (*orthoCoastalCascoBay2018*).
[2] Referred to in the application as "Laminaria saccharina"
[3] Referred to in the application as "Saccharina augustissama"

Application Summary

The applicant is requesting 99.94[4] acres northeast of Clapboard Island in Casco Bay for the suspended culture of sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*). The applicant proposes to culture kelp on up to 30 longlines, each measuring 2,030 feet in length, that would be deployed on the site from October 15th through June 1st.[5] According to the application, the longlines would be deployed with a north-south orientation, separated by 70 feet, and suspended 7 feet below the surface of the water.[6] At maximum capacity, up to 90 buoys marking moorings would be deployed on the propose site, along with up to 1,200 depth control buoys that would be equally spaced along the kelp longlines.[7,8] From June 2nd through October 14th, longlines and depth control buoys would be removed from the site, but moorings and associated mooring equipment and markings would remain throughout the year.[9]

Gear Analysis

The proposed lease area is square and bound by sides that each measure 2,087 feet.[10] The deployment of 30 longlines, each measuring 2,030 feet in length, in a north-south orientation and spaced 70 feet apart from one another, would leave approximately 28.5 feet of space between the longlines and the outer boundaries of the proposed lease Therefore, the proposed lease operations would fit within the proposed lease boundaries. However, this distance provides little buffer for mooring scope on the northern and southern boundaries of the proposal, or for the movement of longlines and depth control lines from wind or current along the eastern and western boundaries.

General Site Characteristics

Maine Department of Marine Resources (MDMR) staff Marcy Nelson and Cheyenne Adams conducted an initial assessment of the proposal on August 28th, 2020.[11] MDMR staff Flora Drury and Cheyenne Adams, along with Army Corps of Engineers (ACOE) staff Colin Greenan and United States Coast Guard (USCG) Lieutenant Shaun Doyle, conducted a second visit to the proposed lease on October 15th, 2020.

The proposed lease occupies subtidal waters northeast of Clapboard Island in Casco Bay (Figure 1, Images 1-6). Although the majority of the proposal is located in the Town of Falmouth waters, the northeast corner of the proposal is located in the Town of Cumberland (Figure 2). Clapboard Island hosts a rocky shoreline and a mixed forest upland (Image 1). Docks and moorings are located along the western shore of the island and residential buildings are located on the island's uplands. The Falmouth shoreline to the west of the proposal is residential and commercial. Falmouth Harbor, which hosts a large anchorage/mooring field and the Falmouth Town Landing, is also located to the west of the proposal (Images 2 & 3). Both sailboats and power driven vessels are moored in this anchorage/mooring field, which according to the Falmouth Police Department, hosts approximately

[4] Applicant originally requested 100 acres. MDMR calculations, based on the provided coordinates, indicate the area is 99.94 acres.
[5] Application, pages 6 & 50
[6] Application, page 50
[7] Application, page 6
[8] Given the length of the longlines and the maximum number of depth control buoys, it appears that spacing between depth-control buoys would be approximately 50 feet, at maximum deployment.
[9] Application, page 6
[10] See Table 3 for more information.
[11] MDMR diver Robert Russel was also present.

1,200 moorings.[12] Sturdivant and Basket Islands are located to the north and northeast of the proposal, respectively (Image 4), while Great Chebeague, Little Chebeague, Long, and Great Diamond Islands are located to the east and southeast (Images 5 & 6).

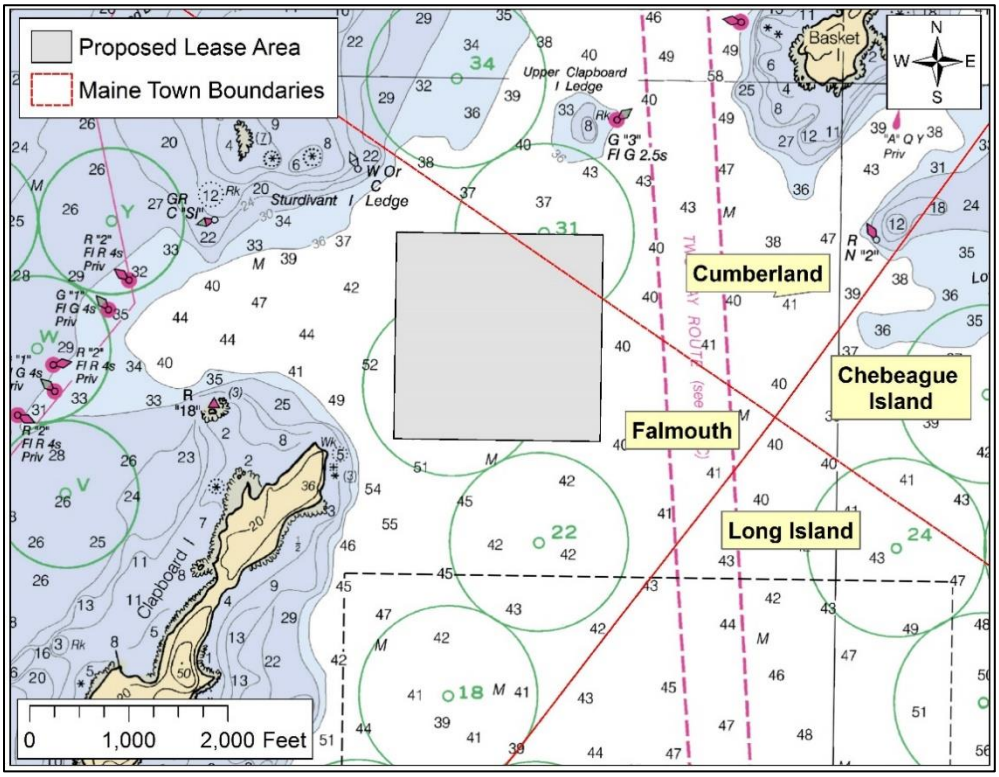

Figure 2: Town boundaries near and within the proposed lease site.

[12] Letter from LT Frank Soule IIII of the Falmouth Police Department. 12.14.2020.

Image 1: Looking southwest toward Clapboard Island from just north of the SW Corner of the proposed lease (August 28, 2020).

Image 2: Looking west toward Clapboard Island and Falmouth Harbor from just north of the SW Corner of the proposed lease (August 28, 2020).

Image 3: Looking northwest toward Falmouth Harbor from just north of the SW Corner of the proposed lease (August 28, 2020).

Image 4: Looking north toward Sturdivant, Cousins, and Basket Islands just north of the SW Corner of the proposed lease (August 28, 2020).

Image 5: Looking east toward Great Chebeague, Little Chebeague, and Long Islands from just north of the SW Corner of the proposed lease (August 28, 2020).

Image 6: Looking south toward Long and Great Diamond Islands from just north of the SW Corner of the proposed lease (August 28, 2020).

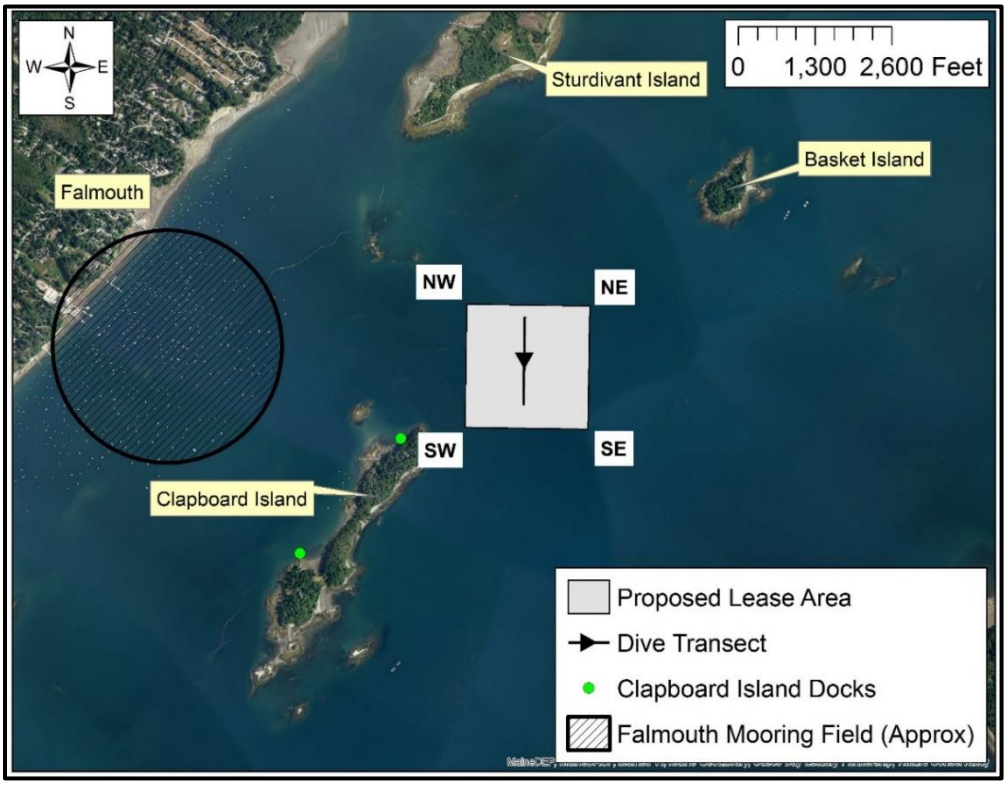

Figure 3: Proposed lease area and dive transect conducted within the proposed lease area on August 28, 2020.

Position and Distances to Shore

POSAID Positioning Software was used to verify the distances and bearings between proposed lease corners (Table 1 & Figure 3). Distances to shore were determined using the measuring tool in ArcMap 10.6, digital orthophotography provided by the Maine Office of GIS, and the application coordinates (Table 2, Figure 1 & Figure 3). According to the measuring tool in ArcMap 10.6, the proposed lease area is 99.94 acres in size.

Table 1. Distances and bearings between application coordinates (WGS84), which encompass 99.94 acres.

Corner	Latitude	Longitude	Metes and Bounds
NW	43.72902389° N	70.183615° W	then 2,087.02 feet at 90.00° True to
NE	43.72902361° N	70.17571972° W	then 2,087.01 feet at 180.00° True to
SE	43.72329833° N	70.17571972° W	then 2,087.00 feet at 270.00° True
SW	43.72329806° N	70.18361417° W	then 2,087.21 feet at 360.00° True to NW.

Table 2. Approximate distances from the proposed lease to surrounding features (Figures 1 & 3). Measurements were made using digital orthophotography provided by the Maine Office of GIS (*orthoCoastalCascoBay2018*) and NOAA Nautical Charts.

Feature	Distance
SW Corner to Clapboard Island, nearest point (~MLW)	~630 feet to the southwest
SW Corner to 36-foot contour line associate with Clapboard Island, nearest point (NOAA Chart)	~400 feet to the southwest
Western Boundary to Falmouth mooring field (digital orthophotography)	~3,100 feet to the west
NW Corner to Sturdivant Island Ledge, nearest point (NOAA Chart)	~1,050 feet to the northwest
NW Corner to White-Orange Danger Buoy near Sturdivant Island Ledge (NOAA Chart)	~750 feet to the northwest
NW Corner to mainland shoreline, nearest point (~MLW)	~0.9 miles to the northwest
NW Corner to Sturdivant Island, nearest point (~MLW)	~2,900 feet to the north
Northern Boundary to 36-foot contour line associated with Upper Clapboard Island Ledge, nearest point (NOAA Chart)	~730 feet to the north
NE Corner to Basket Island, nearest point (~MLW)	~2,400 feet to the northeast
NE Corner to recommended two-way route for deep draft vessels, nearest point (NOAA Chart)	~530 feet to the east
SE Corner to Great Chebeague Island, nearest point (~MLW)	~9,050 feet to the east
SE Corner to Little Chebeague Island, nearest point (~MLW)	~6,260 feet to the southeast

Depth

MDMR collected depths at the proposed lease site on August 28th, 2020 at 10:00 am and October 15th, 2020 at 10:30 am. High tide was predicted to occur at 7:58 am with a height of 8.67 feet on August 28 (Table 3), and depths at the SE, SW, and NW Corners of the proposed lease area were found to be 50.5, 62, and 46 feet deep, respectively. The depth of the NE corner was collected on October 15th shortly after the predicted high tide. At that time, the NE corner of the proposed lease was 52.4 feet deep. Correcting for tidal variation derives corner depths between approximately 39 and 55 feet at mean low water (MLW, 0.0 feet).

Table 3. Tide predictions for Falmouth Foreside, Casco Bay, Maine (43.7317° N, 70.2050° W)[13]

Date	Time	Height (ft)
08/28/2020	1:42 AM	0.15 L
08/28/2020	7:58 AM	8.67 H
08/28/2020	1:54 PM	0.95 L
10/15/2020	4:00 AM	-0.62 L
10/15/2020	10:14 AM	10.4 H
10/15/2020	4:24 PM	-0.72 L

[13] http://tbone.biol.sc.edu/tide/tideshow.cgi

Bottom Characteristics

MDMR staff observed the bottom characteristics of the proposed lease site via dive transect on August 28, 2020 (Figure 3). The sediment was classified using the Coastal and Marine Ecological Classification Standard,[14] a national standard for describing features of the marine environment (Table 4). Sediments were categorized based on visual analysis; no sediment samples were collected, or grain size analyses performed. The proposed lease is composed of soft mud, with burrows scattered throughout (Images 7 & 8).

Table 4. Substrate classification on proposed lease site.

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group
Geologic Substrate	Unconsolidated Mineral Substrate	Fine Unconsolidated Substrate	Mud

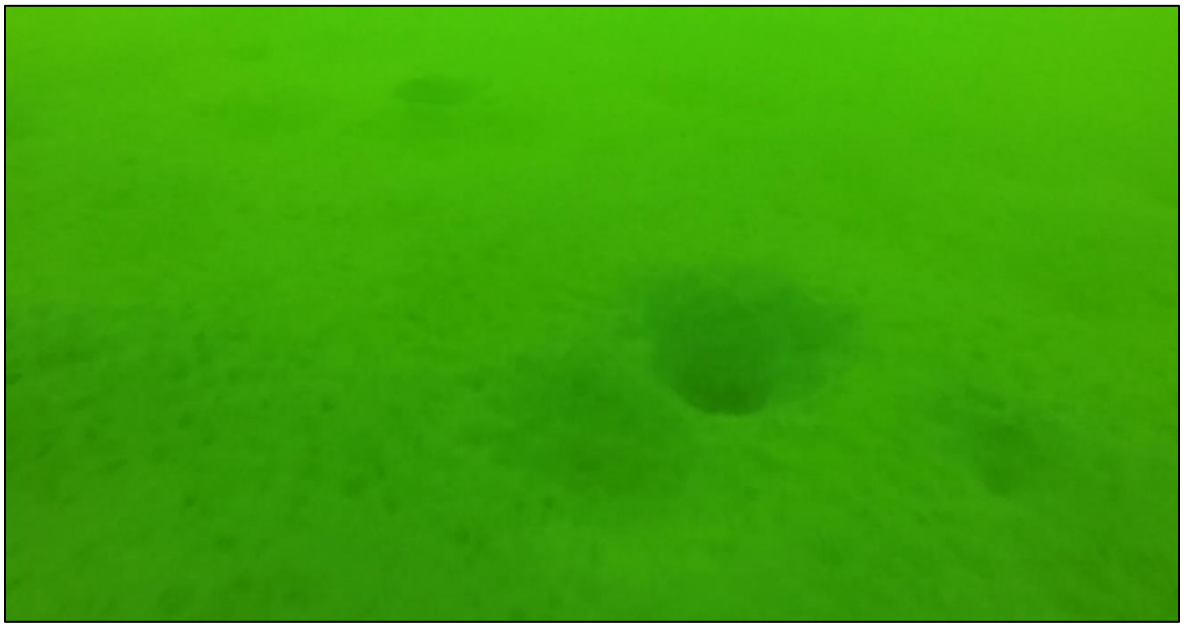

Image 7: Mud and burrows on the bottom of the proposed lease (August 28, 2020).

[14] https://www.fgdc.gov/standards/projects/cmecs-folder/CMECS_Version_06-2012_FINAL.pdf

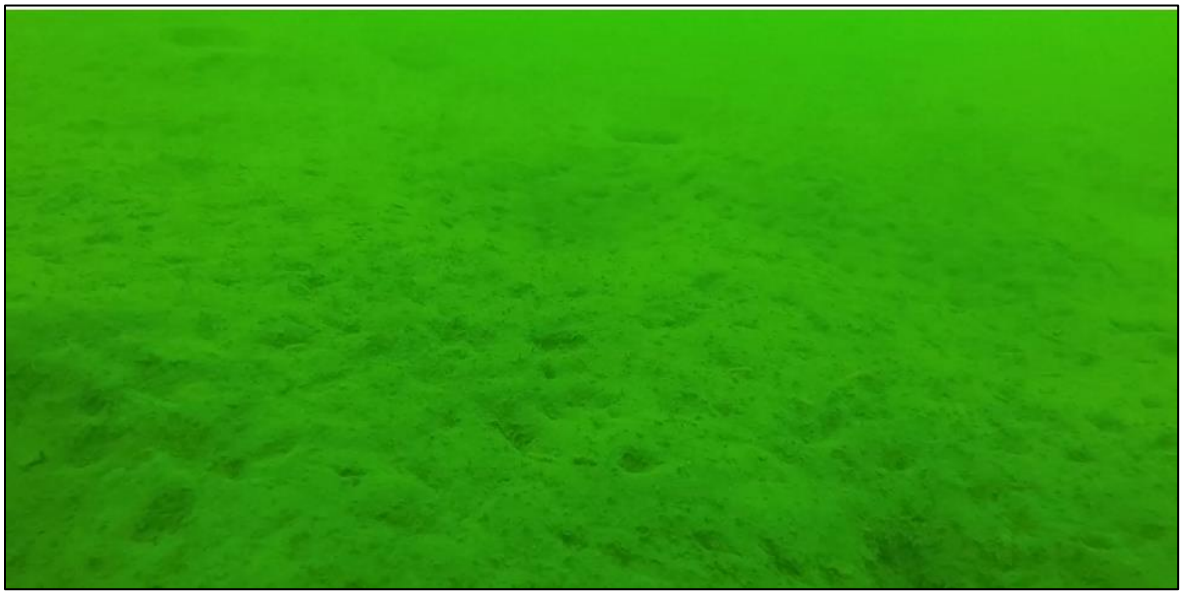

Image 8: Mud on the bottom of the proposed lease (August 28, 2020).

The criteria MDMR uses to determine the suitability of an aquaculture operation to an area (MDMR Regulations Chapter 2.37(1)(A)) are discussed, with respect to the proposal, below:

(1) Riparian Ingress and Egress

The proposed lease is located in Casco Bay, approximately 630 feet northeast of Clapboard Island at mean low water. Clapboard Island hosts multiple residential buildings; a cluster of houses is located on the island's southwest section, and a second cluster is located on the northeast section of the island. Based on DMR observations, docks and moorings used to access the island are located along the west side of the island, which faces the mainland shoreline. Aerial photographs show two docks along this shoreline; the closer of the two is located approximately 1,085 feet from the proposal (as the crow flies), with multiple moorings located nearby (Figure 3 & Image 9). A larger mooring field, which appeared to host both recreational and commercial uses is located along the middle of the island's western shore, over 2,000 feet from the proposal (Image 10). During the August 28, 2020 site visit, at least 6 moored floats were observed in this mooring field housing various types of equipment. The second dock along the island's western shore is located southwest of this mooring field, approximately 3,520 feet from the proposal (Figure 3). As the closest of these docks is located over 1,000 feet from the proposal, the proposed lease, if granted, would not negatively impact the use of these docks, moorings, and moored floats directly. However, navigation to and from these access points from Greater Casco Bay could be impacted and is discussed in "Section 2: Navigation".

Due to the proposed lease location relative to the long and skinny shape of Clapboard Island, the majority of the island's shoreline, and therefore most of the riparian ingress and egress points, are unlikely to be impacted by the proposal. The one exception to this is the northeast point of the island, which is located approximately 630 feet from the proposal at mean low water. Although no docks or moorings were observed along this point during the site visits or in the review of aerial photographs, if infrastructure for access were built on this point in the future, the proposal's 90 year-round moorings and 30 seasonally-deployed 2,030-foot longlines

would likely impact their use by requiring vessels to navigate around the gear when accessing the infrastructure from the north or east (Figure 4). It is worth noting that this northeast tip of Clapboard Island is unique in comparison to the rest of the island, in that it is the shoreline with most immediate access to deep water (Figure 1). However, the suitability of this location for a dock or mooring would be influenced by other factors, as well.

Sturdivant Island to the north, and Basket Island to the northeast, are the two other closest shorelines, at 2,900 feet and 2,375 feet from the proposal at mean low water, respectively. Due to these distances, it is unlikely that riparian ingress and egress to and from access points on these islands would be hindered by the proposed operations. Navigation to and from these islands from Greater Casco Bay is discussed in "Section 2: Navigation".

Image 9: Closest dock and moorings to the proposed lease, located on the western shore of Clapboard Island (August 28, 2020).

Image 10: Mooring field located along the western shore of Clapboard Island (August 28, 2020).

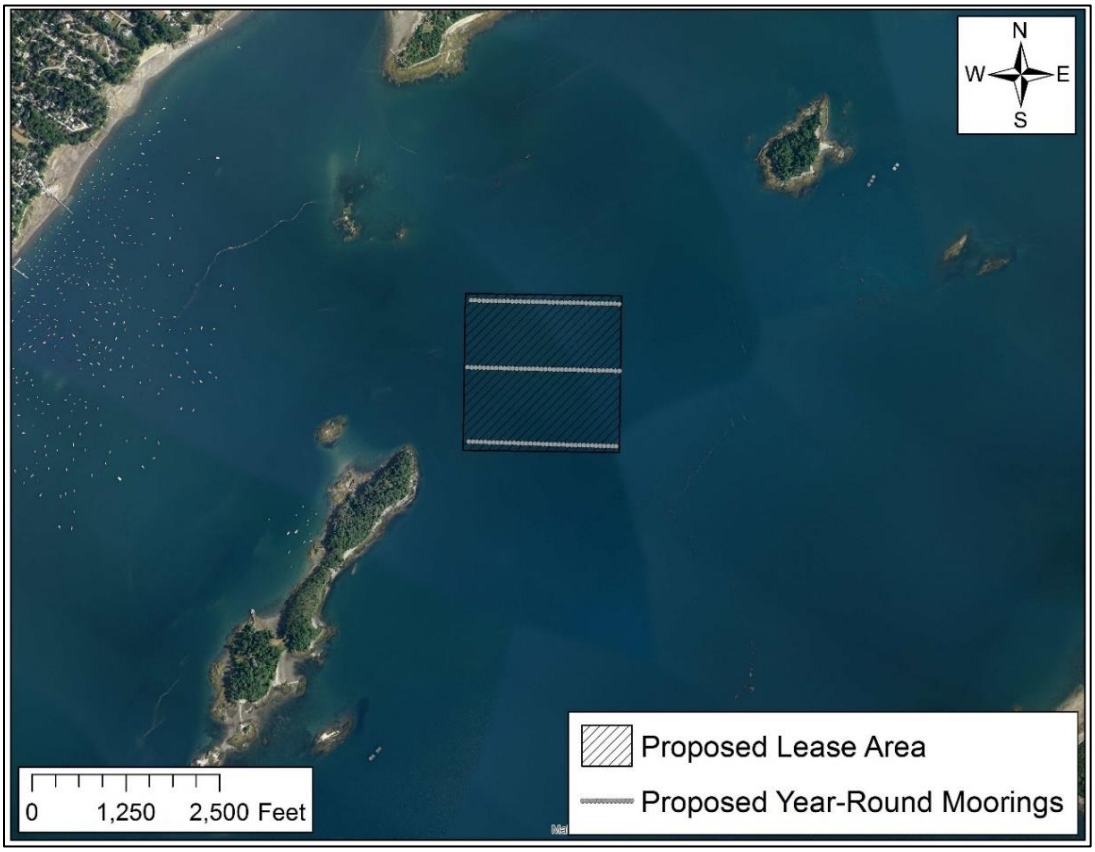

Figure 4: Location of proposed year-round mooring gear within proposed lease area.

(2) Navigation

A. Overview

The proposed lease is located in Casco Bay, between Clapboard, Basket, and Sturdivant Islands, and to the east of Falmouth Harbor and the mainland shoreline (Figure 3). Casco Bay experiences heavy vessel traffic for commercial and recreational purposes, especially in the warmer months. Recreational sailboats, motorboats, and hand-powered vessels, along with commercial vessels such as fishing boats and ferries, are commonly observed navigating in Casco Bay. As the proposed lease is located within one of three routes leading into Falmouth Harbor (Figure 5), which hosts approximately 1,200 moorings, vessel traffic in the vicinity of the proposal is frequent in the summer months. According to the Falmouth Harbormaster, the proposed lease is located in a "heavily traveled area to and from the anchorage"[15,16] and according to the Falmouth Police Department's Marine Unit, the proposed lease site is a "high traffic area from May to October".[17]

On the August 28, 2020 site visit, approximately 10 vessels, including a seining vessel, sailboats, lobster boats, and kayaks, were observed navigating through the proposal during the approximately 1.5 hours that DMR staff were onsite. Other vessels, including recreational motorboats, were observed in the vicinity of the proposal. Two vessels navigated through the

[15] Harbormaster Questionnaire. Submitted by Falmouth Harbormaster on 03.06.21.
[16] Also referred to in this report as the anchorage/mooring field.
[17] Letter to DMR from Falmouth Police Department. 12.14.2020.

site during the October 15, 2020 site visit; DMR staff was in the vicinity of the proposed site for approximately 30 minutes.

From October 15th through June 1st, annually, up to 30 longlines, each measuring over 2,000 feet in length, are proposed to be deployed on the lease site.[18] The longlines would be secured with 3 moorings each, resulting in a total of 90 moorings on site at maximum deployment. Longline depth would be maintained at 7 feet below the surface of the water with vertical depth control lines attached to a buoy and cement weight; 1,200 depth control lines would be on site at maximum deployment.[19] Although some vessels that frequent the area might be able to navigate over the proposed longlines, it is likely that most vessels navigating in the area would opt to avoid this due to the risk associated with navigating over longlines suspended below the water at a depth unable to be visually confirmed from a distance. Additionally, although some vessels might navigate within the proposed 70-foot spaces between the longlines (that would be oriented north-south), it is likely that many vessels, especially those with propellers or keels, would avoid navigating in the proposed lease area altogether, due to the aforementioned risk of entanglement. Furthermore, the vertical depth control lines that connect a floating buoy to a cement weight could be especially hazardous for vessels with propellers.

From June 2nd through October 14th, annually, the applicant proposes to remove longlines and depth control gear from the lease site but proposes to leave the 90 moorings and mooring markers onsite. These moorings are proposed to be deployed in 3 rows of 30 moorings oriented approximately east-west and separated by slightly over 1,000 feet (Figure 4). As result of this, it would be much easier for vessels to operate through the proposed lease site in the summer months when boating traffic is more frequent in the area.

The proposal's impact to navigation in the area is discussed in more detail below based on direction of travel and considering both the winter and summer gear configurations.

B. East – West Navigation

The proposed lease is located approximately 1 mile from the mainland shore, and approximately 3,100 feet from the Falmouth Harbor mooring field (Figure 5). The proposed lease is located within one of three routes leading into Falmouth Harbor, and within one of the two routes that lead into Falmouth Harbor from Greater Casco Bay, where most boat traffic is expected to occur (Figure 5). Boaters operating in the route in which this lease is proposed are naturally constrained by the northern tip of Clapboard Island and the white-orange danger buoy marking Sturdivant Island Ledge, which are separated by approximately 2,775 feet (Figure 6). The proposed lease spans the majority of this distance, with the exception of approximately 630 feet that separate the proposal from the Clapboard Island shoreline at mean low water, and approximately 750 feet which separate the proposal from the white-orange danger buoy (Figure 6). When measuring between the proposal and the 36-foot contour lines associated with Clapboard Island and Sturdivant Island Ledge, which mark where water depths begins to shallow and therefore might be avoided, the distances are reduced to approximately 400 and 500 feet, respectively. From October 15th through June 1st annually, when longline and depth

[18] Application, page 6
[19] Application, page 6

control gear would be deployed, the majority of mariners would need to navigate through these gear-free routes when traveling easterly-westerly to and from the Falmouth shoreline. Although these distances are likely adequate for most power-driven vessels that frequent the area to navigate through, a roughly ½-mile space currently available for navigation would be reduced to two routes of a few hundred feet, if the lease is granted. Furthermore, the reduction in navigable water could pose an additional challenge to vessels under sail.

The observations made during the site visits on August 28th, 2020 and October 15th, 2020, and the fact that the proposed lease is located between a large anchorage/mooring field and Greater Casco Bay, indicate that the area experiences heavy boater traffic. Therefore, even though boating traffic to and from Falmouth Harbor is expected to be lighter during the winter months, the routes to the north and south of the proposed lease could become congested, especially in May and mid to late October, when longlines would be present onsite but recreational and commercial boating traffic can still be heavy.

The Falmouth Police Lieutenant who oversees the Marine Unit at the Falmouth Town Landing submitted a comment with regards to the proposed lease operations, stating concerns about the proposal's impacts on navigation to and from the Falmouth anchorage/mooring field. In this letter, the Lieutenant also mentioned a memorandum of understanding which allows the Long Island Fire Department to handle medical transports at the Falmouth Town Landing so that patients can be delivered more quickly to medical facilities; the letter further stated that the proposed lease is "directly in the path of these transfers that occur by emergency vessels".

From June 2nd through October 14th annually, when vessel traffic within Casco Bay is typically the heaviest, longlines and depth control gear would be removed from the lease site. During this time, gear on the proposal would be reduced to 3 rows of moorings and mooring markers; these rows would be deployed in an east-west orientation and would be separated by over 1,000 feet (Figure 4). Therefore, vessels would be able to navigate between the rows of moorings without the risk of becoming entangled in suspended longlines. The orientation of these rows would be parallel, and therefore conducive, to the predicted flow of summer boating traffic traveling easterly-westerly in and out of Falmouth Harbor. It should be noted, however, that not all vessels traveling north of Clapboard Island in and out of the Falmouth Harbor are coming to and from due west or east. Therefore, the most direct route for some vessels could lead them through one or more of the rows of moorings, as opposed to between the rows. An example of this can be seen in a figure displaying 2018 and 2019 AIS (Automatic Identification System) data, which was sent to MDMR by the U.S. Coast Guard (USCG) on March 16, 2021 (Addendum 1).[20] Although it is important to note that AIS data only shows the tracks of vessels equipped with AIS, and therefore does not represent the entirety of vessels that transit the area, this addendum shows a route travelled frequently by one or more vessels equipped with AIS that cuts through the southern boundary of the proposal, and therefore through a proposed row of moorings.

The extent to which the summer or winter gear deployment would cause any mariner unfamiliar with the operations to avoid the area is difficult to predict. Additionally, if granted, the US Coast

[20] USCG originally created this figure for the Army Corps of Engineers (ACOE) on February 28, 2020 as part of their application review. As multiple proposed sites were depicted on the original figure, DMR requested the figure be recreated to avoid confusion. The original letter and figure are available in the case file.

Guard might determine it necessary to display the lease boundaries on NOAA Navigational Charts[21], which could add to a mariner's uncertainty or unwillingness to navigate through the lease area, even when it would be safe to do so. If vessels travelling to and from Falmouth Harbor, for example, avoid travelling through the lease area during the summer months when vessel flow is heavy, the space available for navigation between Clapboard Island and the proposal, and the white-orange danger buoy and the proposal, may get congested even when longlines are removed from the site (Figure 6).

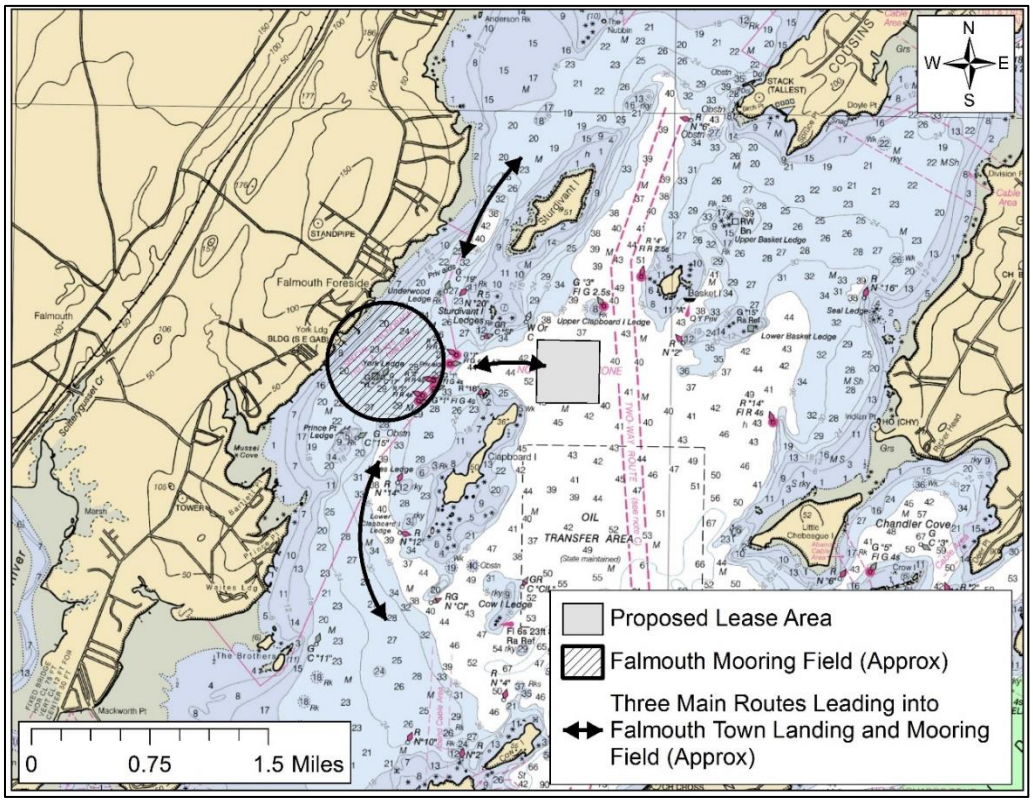

Figure 5: The approximate location of the three main routes leading into Falmouth Town Landing and Anchorage/Mooring Field.

[21] Conversation between DMR Staff F. Drury and USCG BCMS Franklin on February 5, 2021.

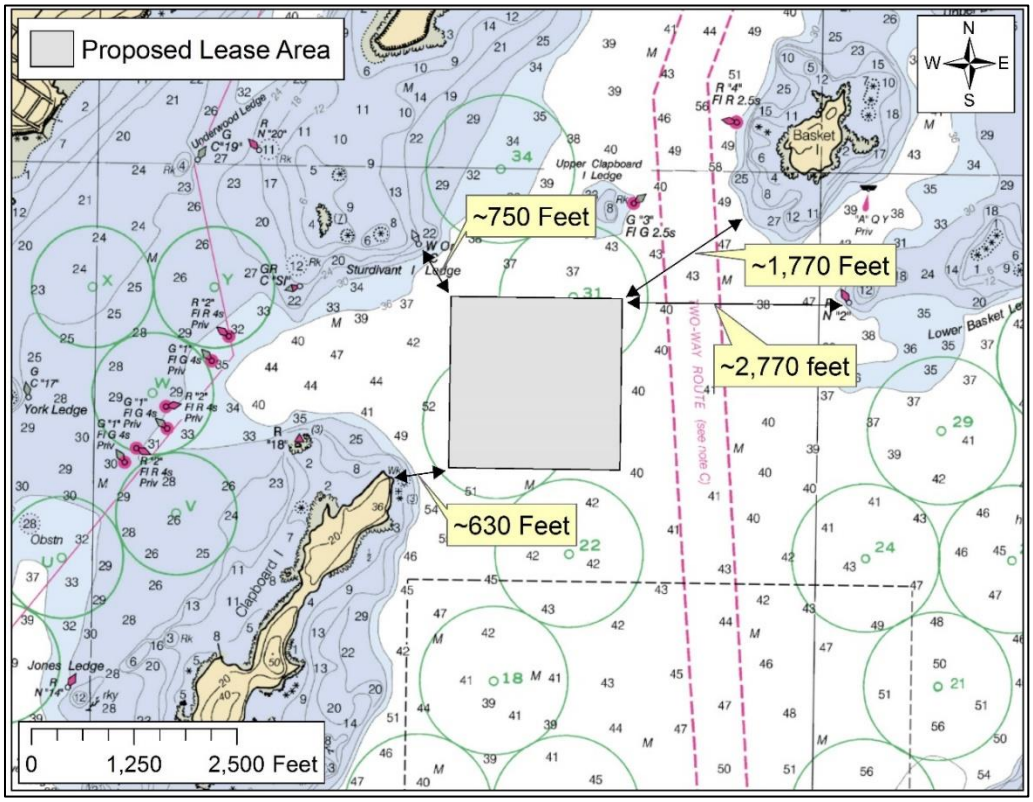

Figure 6: Distances between proposed lease area and surrounding islands and navigational aids.

C. North – South Navigation

The proposed lease is located to the west of a marked channel that leads north-south between Sturdivant and Basket Islands. This marked channel contains a recommended two-way route for deep draft vessels, the delineation of which is located approximately 530 feet to the east of the proposed lease (Figure 6). Addendum 1 displays vessel tracks that cross over the eastern section of the proposed lease when navigating northerly-southerly between Sturdivant and Basket Islands; this addendum, which was created by the USCG on March 16, 2021, displays 2018 and 2019 AIS vessel tracks navigating between Sturdivant and Basket Islands to the east of the proposed lease area as well.[22] The navigational constraints to the east of the proposed lease are Red Nun "2" and the 36-foot contour line that surrounds Basket Island; these features are located approximately 2,770 feet and 1,770 feet, respectively, to the east of the proposed lease (Figure 6). As result of these distances, there would likely be adequate room for this traffic to avoid the proposed lease site when operating between, or to and from, Sturdivant and Basket Island from Greater Casco Bay.

[22] USCG originally created this figure for the Army Corps of Engineers (ACOE) on February 28, 2020 as part of their application review. As multiple proposed sites were depicted on the original figure, DMR requested the figure be recreated to avoid confusion. The original letter and figure are available in the case file.

(3) Fishing and Other Uses

During the site visit conducted on August 28, 2020, more than 50 lobster buoys were observed in the general area of the proposed lease, including several within the proposed lease boundaries. Light lobstering activity, which was concentrated near Clapboard Island, was observed in the area during the October 15, 2020 site visit. On this date, approximately 10 lobster buoys were observed within the proposed lease. Additionally, lobsters (*Homarus americanus*) were commonly observed by MDMR divers during the dive transect conducted on August 28, 2020. As the lobster fishery in Maine follows the annual migration and molt cycle of lobsters, it is likely more prevalent in the area during the summer or fall. As the applicant proposes to remove longlines and associated gear from the lease site annually from June 2nd through October 14th, the longline deployment may overlap with spring or fall lobster fishing in the area. As the applicant proposes gaps of 70 feet between each longline, in theory there might be room for lobstermen to set traps between the longlines, and some fishing vessels may be able to navigate over the longlines, which are proposed to be deployed 7 feet below the surface of the water. However, the possibility of gear entanglement may deter some, if not most, lobstermen from setting traps in the area when the longlines would be deployed. Lobstermen may be further deterred from using the area due to the risk associated with operating boats in the 70-foot gaps between longlines, as maneuvering or changing direction might be difficult, especially when the depth and location of the suspended longlines might not be visible from the surface.

While longline deployment would be seasonal, the applicant proposes to leave 90 mooring blocks and associated mooring markers onsite throughout the year (Figure 4). These moorings would be deployed in 3 rows of 30 moorings; the rows of moorings would be separated by 1,015 feet and the moorings within each row would be deployed every 70 feet.[23] Therefore, although the majority of the proposed acreage would be available for lobstering between lines of moorings, it is possible that the proposed operations would deter some lobstering activity in the area during the summer months when the longlines are removed.

During the site visit conducted on August 28, 2020, menhaden (*Brevoortia tyrannus*) were observed in abundance in the vicinity of the proposed lease. One seining vessel was observed navigating through the site, appearing to DMR staff to be looking for the schooling menhaden. Bait fishing is common in Casco Bay in the summer months when schooling fish are present and the season is open, and therefore it is likely that the commercial harvest of schooling baitfish occurs in the vicinity of the proposed lease area during these times. The applicant proposes to remove longlines from the site from June 2nd through October 14th annually, when the majority of the landings associated with this fishery occur. However, since 2014, the earliest and latest dates that menhaden landings have been reported in Maine have been May 3rd and November 11th, both of which fall inside the proposed timing for annual longline deployment.[24] Additionally, the proposed year-round deployment of 3 rows of 30 moorings across 99.94 acres is likely to negatively impact menhaden fishing within and nearby the proposed lease area as fishermen would need to avoid the three ~2,030 foot long rows of moorings within the proposal.

During the underwater video transect of the proposed lease area, no commercially harvested species with a winter-only harvest season, such as sea scallops (*Placopecten magellanicus*) or green sea urchins (*Strongylocentrotus droebachiensis*) were observed. However, at maximum capacity the

[23] Application, page 50
[24] DMR Landings Program

proposed gear would prevent dragging, and is likely to discourage diving activities, within the proposed area from October 15th to June 1st.

No recreational fishing was observed during MDMR's visits to the proposed lease. It is possible that recreational hook and line fishing activity takes place within the proposed lease area; however, as recreational fishing is more prevalent during the summer months, and because hook and line fisherman could likely avoid the 90 moorings that are proposed to remain in place throughout the year, unreasonable interference to recreational fishing is unlikely to occur.[25] According to the Falmouth Harbormaster, "there should not be any impact on recreational fishing" from the proposal".[26]

(4) Other Aquaculture Uses

On the date this report was published, there were 4 active leases and 4 active Limited Purpose Aquaculture (LPA) licenses within 1 mile of the proposed lease (Figure 7). The closest aquaculture activity to the proposal is CAS SI2, a standard lease for the culture of marine algae held by Summit Point, LLC. Summit Point, LLC is the applicant of the proposal considered in this report. CAS SI2 is located approximately 1,700 feet to the north of the proposed lease. The closest aquaculture lease or license held by an individual other than the applicant is CAS SI, which is permitted for the suspended culture of shellfish and located approximately 3,150 feet to the north of the proposal.

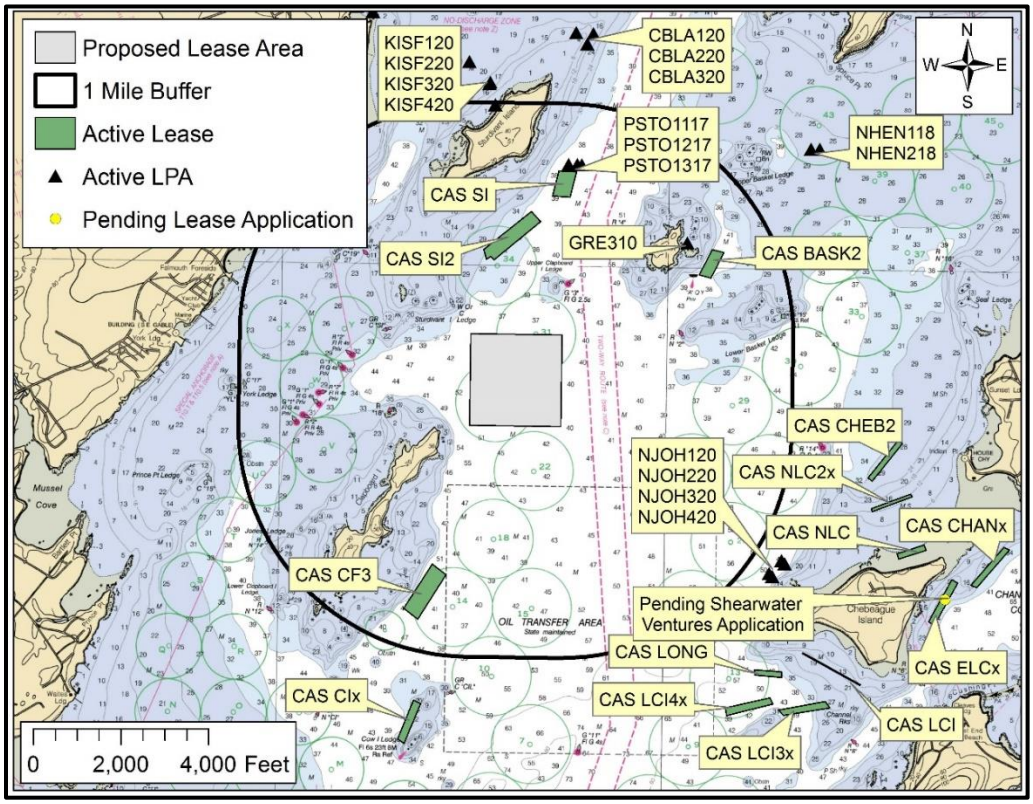

Figure 7: Aquaculture leases, Limited Purpose Aquaculture (LPA) licenses, and pending lease applications[27] in the vicinity of the proposed lease.

[25] Application, page 11 (labeled page 14)
[26] Harbormaster Questionnaire. Submitted by Falmouth Harbormaster on 03.06.21.
[27] Pending lease applications shown here were deemed complete prior to the proposed lease area discussed in this report.

(5) Existing System Support

On August 28, 2020, MDMR staff conducted a dive transect through the proposed lease to assess the epibenthic ecology of the area (Figure 3). The bottom is composed of soft mud (Images 7-8 & 11-12). Burrows in the mud were observed throughout the site. Epibenthic macro flora and fauna observed during the dive transect are described in Table 5. Lobster (*Homarus americanus*) and crab (*Cancer sp.*) were common within the lease site. Some detached eelgrass (*Zostera marina*), rockweeds (*Fucus* and *Ascophyllum sp.*), and kelp (*Saccharina latissima*) were also observed.

Table 5. Species observed during the dive transect conducted within the proposed lease site on August 28, 2020.

Species Observed	Abundance
Skeleton shrimp (*Caprella sp.*)	Abundant
Lobster (*Homarus americanus*)	Common
Crab (*Cancer sp.*)	Common
Squid egg cases	Rare
Drift kelp, rockweed, and eelgrass	Rare

Image 11: Lobster (*Homarus americanus*) observed within the proposed lease site (August 28, 2020).

Image 12: Squid egg cases attached to knotted wrack (*Ascophyllum nodosum*) observed during dive transect conducted on August 28, 2020.

Eelgrass (*Zostera marina*)

The most recent eelgrass (*Zostera marina*) data, collected in 2018 by the Maine Department of Environmental Protection in cooperation with the Casco Bay Estuary Partnership, documented no eelgrass beds within the proposed lease area. The only documented beds within 1,000 feet of the proposal were located off the northern tip of Clapboard Island; the closest of these beds was located approximately 580 feet to the southwest of the proposal (Figure 8).

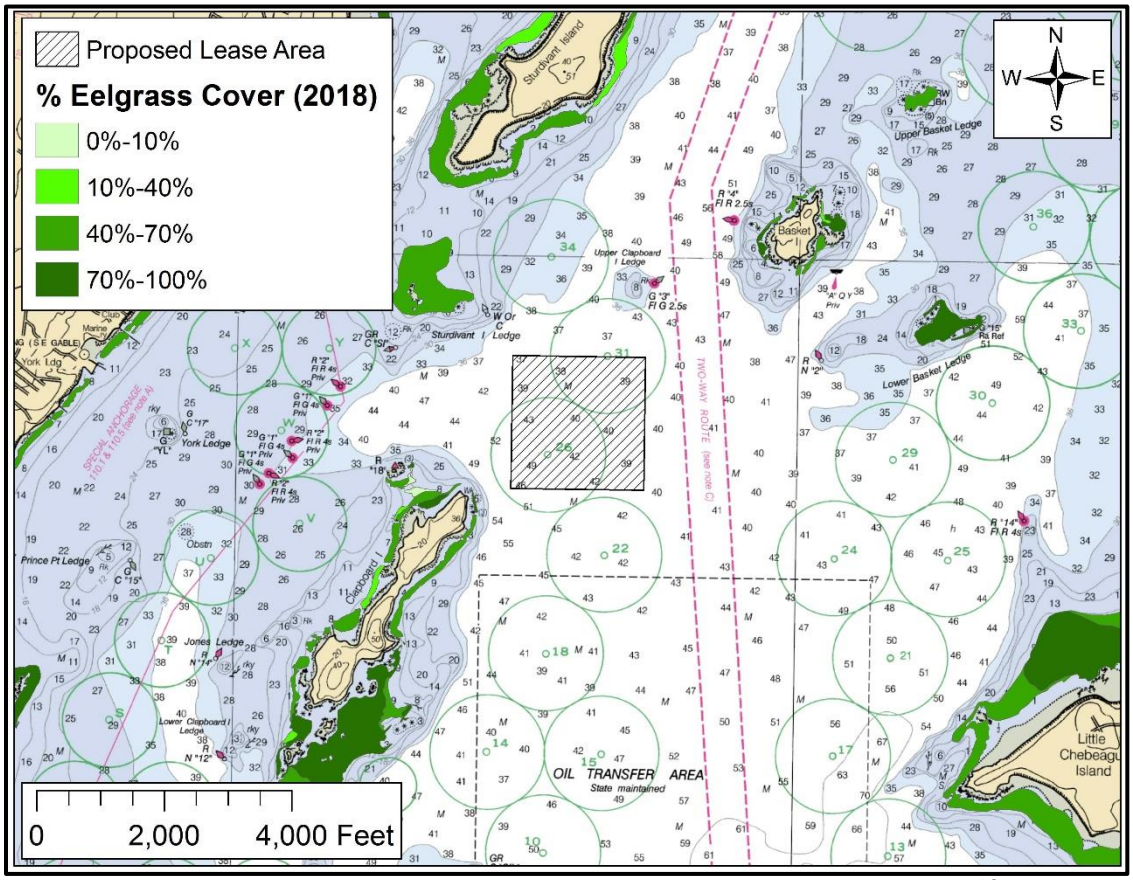

Figure 8: Eelgrass (*Z. marina*) near the proposed lease site, 2018.[28]

Wildlife

During MDMR's site review on August 28, 2020, harbor seals (*Phoca vitulina*) were observed chasing schooling menhaden (*B. tyrannus*) in the vicinity of the proposed lease.

According to GIS (Geographic Information System) data of Significant Wildlife Habitat maintained by the Maine Department of Inland Fisheries and Wildlife (MDIF&W) and available through the Maine Office of GIS, at the closest point, the proposed lease is located approximately 580 feet to the east of Tidal Waterfowl and Wading Bird Habitat (Figure 9). Additionally, a bald eagle (*Haliaeetus leucocephalus*) nest is present on the northern tip of Clapboard Island; the 660-foot USFWS-mandated protective buffer associated with this nest is located approximately 200 feet to the west of the proposed lease, at the closest point. The nest was last monitored in 2018 and was observed to be intact at that time.[29] While bald eagles are no longer endangered, they are protected by the federal Bald and Gold Eagle Protection Act and the U.S. Fish and Wildlife Service (USFW) National Bald Eagle Management Guidelines.

Essential Habitat for the Roseate Tern (*Sterna dougallii*) and Seabird Nesting Islands are also located within one mile of the proposed lease, near the southern tip of Clapboard Island (Figure 9).

[28]Data obtained from MEDEP maintained SDE Feature Class "GISVIEW.MEDEP.Eelgrass2018"
[29] https://fws.maps.arcgis.com/apps/webappviewer/index.html?id=796b7baa18de43b49f911fe82dc4a0f1

On December 4, 2019, Rebecca Settele (Wildlife Biologist, MDIF&W) responded, by email, to a "Request for Agency Review and Comment" stating "Minimal impacts to wildlife are anticipated for this project".

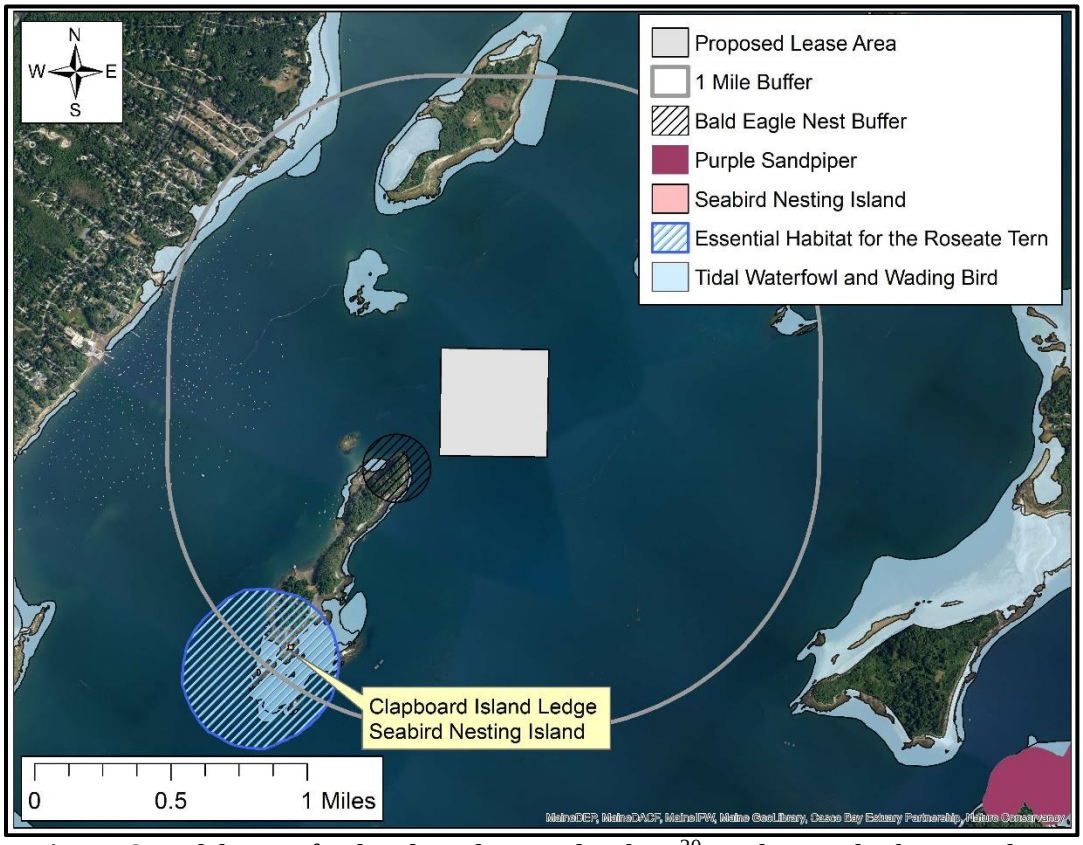

Figure 9: Tidal Waterfowl and Wading Bird Habitat[30], Endangered, Threatened, or Species of Special Concern Habitat[31], and bald eagle nests[32], Seabird Nesting Islands[33], and Essential Habitat for the Roseate Tern[34] near the proposed lease site.

(6) Source of Organisms to be Cultured

The applicant proposes to source both sugar kelp (*Saccharina latissima*) and skinny kelp (*Saccharina angustissima*) from Ocean's Balance and Sea Greens Farms in Biddeford, Maine. Per DMR Rule Chapter 24.03, Ocean's Balance and Sea Greens Farms must source marine algae from Maine state waters.

[30] Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.Twwh"
[31] Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.ETSC"
[32] Data obtained from USFWS: https://services.arcgis.com/QVENGdaPbd4LUkLV/ArcGIS/rest/services ("Maine_Bald_Eagles_2019_with_twn_cnty")
[33] Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.sni"
[34] Data obtained from MDIWF maintained SDE Feature Class "GISVIEW.MEIFW.Ehrtern"

(7) Interference with Public Facilities

The proposed lease is not within 1,000 feet of any beach, park, docking facility, or conserved lands owned by federal, state, or municipal governments (Figure 10). The closest publicly owned parcel is the Falmouth Town Landing, which is located approximately 5,600 feet to the northwest. The Falmouth Police Lieutenant who oversees the Marine Unit at the Falmouth Town Landing submitted a comment with regards to the proposed lease operations, stating concerns about the proposal's impacts on navigation to and from the Falmouth anchorage/mooring field. In this letter, the Lieutenant also mentioned a memorandum of understanding which allows the Long Island Fire Department to handle medical transports at the Falmouth Town Landing so that patients can be delivered more quickly to medical facilities; the letter further stated that the proposed lease is "directly in the path of these transfers that occur by emergency vessels" (Figure 11). Therefore, because the transfer of patients at the Falmouth Town Landing might be slowed or otherwise impeded due to the presence of the proposed lease area, it appears that the proposed lease could interfere with the use of a dock owned by a local government.[35] The Town of Cumberland also expressed concern about the proposal, and requested intervenor status citing concerns about the "impacts to our mooring area, shellfishing, lobsters, and recreation in our area of Casco Bay this application will have". Figure 11 shows the location of the Broad Cove Reserve Pier and Mooring Field, in the Town of Cumberland.

Two privately-owned parcels[36] held in conservation by Maine Coast Heritage Trust, are located on the northeastern portion of Clapboard Island, within 1,000 feet of the proposed lease. Privately-owned conserved lands are not included in the decision criteria for granting standard leases, as per MDMR Regulations Chapter 2.37(1)(A)(7).

[35] DMR Rule Chapter 2.37(1)(A)(7) states: "The Commissioner shall consider the degree to which the lease interferes with public use or enjoyment within 1,000 feet of a beach, park, docking facility or certain conserved lands owned by the Federal Government, the State Government or a municipal government…"

[36] Project titles: Clapboard Island East and Clapboard Island Cottage Lot

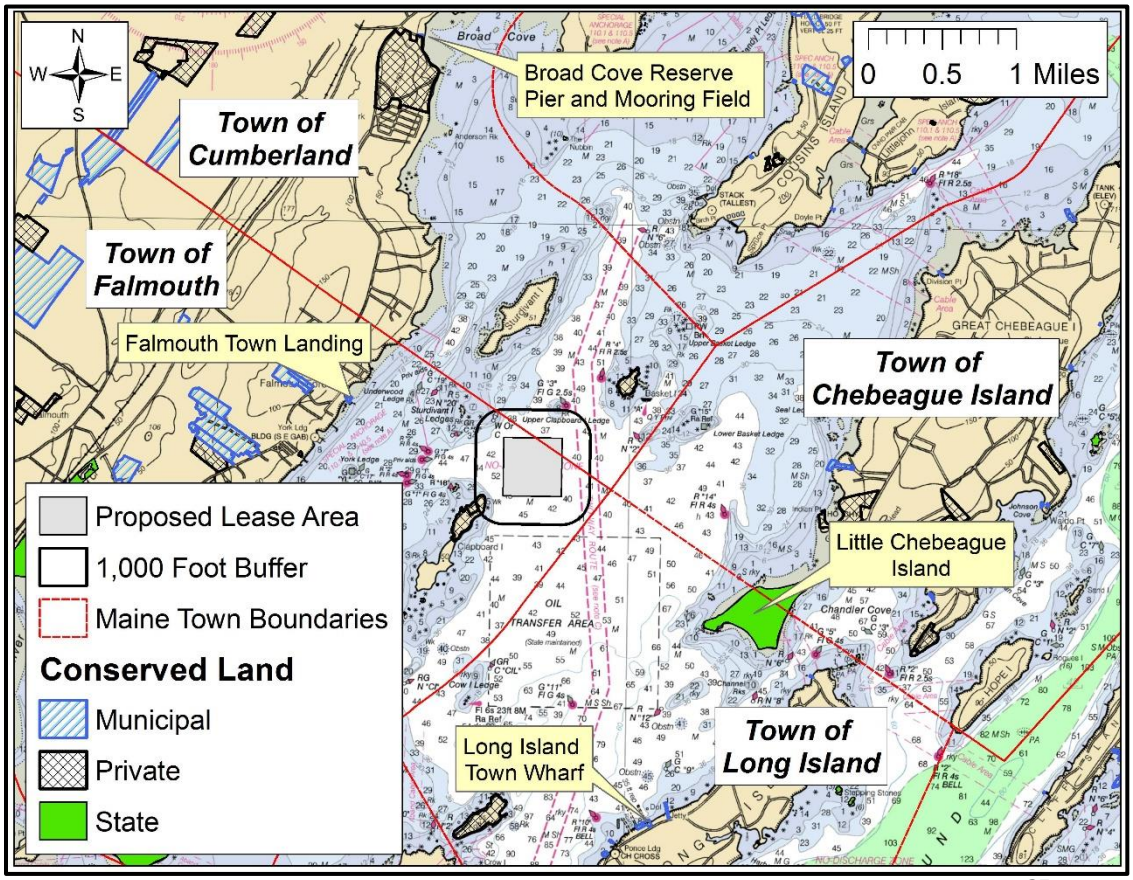

Figure 11: Conserved land and public facilities near the proposed lease site.[37]

(8) Lighting

The applicant does not propose to use lights on the proposed lease site, other than those that might be required by the Coast Guard to mark the site.[38]

(9) Noise

According to the application, boats proposed for use at the lease site include a 24-foot Carolina Skiff, along with vessels similar to lobster boats.[39] The boats proposed are consistent with the size and type of vessels routinely used for aquaculture operations, as well as other commercial and recreational uses, along the Maine coast. According to the application, a motorless barge, brought to and from the site with the Carolina Skiff, would house a small hauler or winch rig along with a washdown hose.[40] At maximum, this equipment would be powered with a muffled 25-horsepower generator and would be used during daylight hours on a daily to weekly basis from October 15th through June 1st.[41]

[37] Data obtained from SDE Feature Class sourced from The Maine Office of GIS "GISVIEW.MECONSLANDS.Conserved_Lands"
[38] Application, page 14
[39] Application, page 11 & 13
[40] Application, page 13
[41] Application, page 13 & 14

(10) Visual Impact

According to the application, up to 90 buoys marking moorings would be deployed on the propose site year-round, along with up to 1,200 depth control buoys that would be deployed along the kelp longlines from October 15th to June 1st, at maximum layout.[42] Both mooring markers and depth control buoys are proposed to be white in color.[43] A work barge, which would be brought to and from the lease with a Carolina Skiff, is also proposed to be used on the proposed site.[44,45]

[42] Application, page 6
[43] Application, page 10
[44] Application, page 13
[45] As the work barge would not remain onsite, the dimensions of this barge were not included in this application, however, as this barge would be routinely used by the leaseholder, the dimensions of the barge should be obtained at the lease hearing to ensure that it complies with the visual impact criteria established in DMR Rule 2.37.

Addendum 1

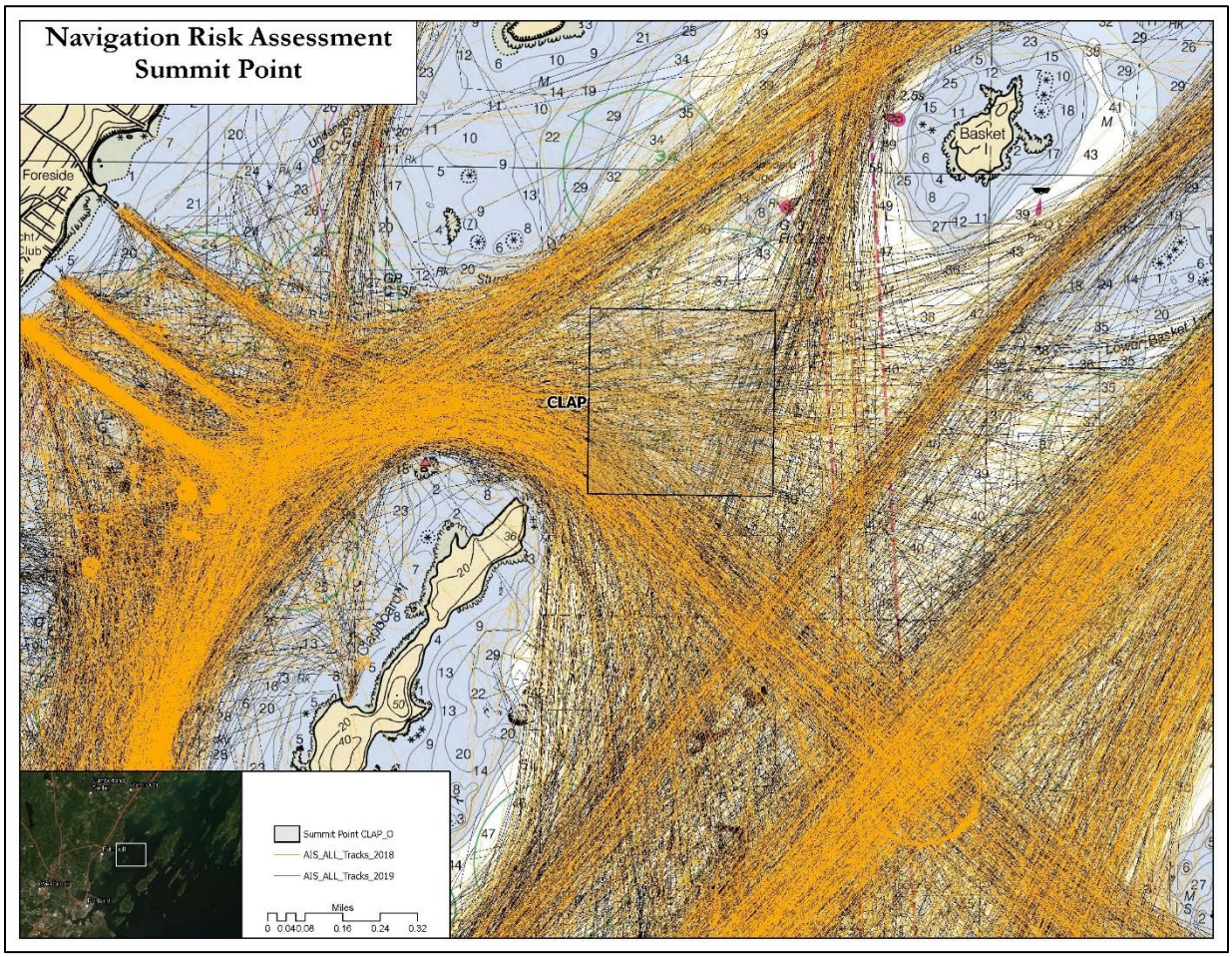

Figure created by USCG on March 16, 2021 showing 2018 and 2019 AIS (Automatic Identification System) data in the vicinity of the proposed lease site.